1	Hits	Search Text	DB	Time stamp
	845	dtmf adj2 decoder	USPAT;	2004/07/05 14:52
			US-PGPUB;	
			EPO; JPO	
2	845	(dtmf adj2 decoder) and ad@<=20020124	USPAT;	2004/07/05 14:52
_		(	US-PGPUB;	
			EPO; JPO	
3	477546	amplifier	USPAT;	2004/07/05 14:52
,	777540	ampinici		2004/07/05 14.52
			US-PGPUB;	
_	100	(146120.1	EPO; JPO	0004/05/05 14 50
4	109	(dtmf adj2 decoder) same amplifier	USPAT;	2004/07/05 14:53
			US-PGPUB;	
_			ЕРО; ЛРО	1
6	591077	cpu or processor or digital adj logic	USPAT;	2004/07/05 15:03
			EPO; JPO	
7	76	((dtmf adj2 decoder) same amplifier) and (cpu or processor or digital adj	USPAT;	2004/07/05 15:04
1		logic)	ЕРО; ЈРО	
8	165559	analog adj3 digital adj2 converter or "a/d" or codec	USPAT;	2004/07/05 15:04
			ЕРО; ЛРО	
9	15	(((dtmf adj2 decoder) same amplifier) and (cpu or processor or digital	USPAT;	2004/07/05 15:04
		adj logic)) and (analog adj3 digital adj2 converter or "a/d" or codec)	EPO; JPO	230
10	1	"6195421".PN.	USPAT	2004/07/05 15:06
	736	379/216.01,355.01-355.1.ccls.	USPAT;	
-	/30	373/210.01,333.01-333.1.0018.	•	2004/02/02 17:30
	969	270,014,01,255,01,254,01, 1	ЕРО; ЛРО	0004/00/00 17 00
-	862	379/216.01,355.01-356.01.ccls.	USPAT;	2004/02/02 17:29
			ЕРО; ЈРО	
- 1	8961	(abbreviat\$3 or speed) near3 (dial\$3 or number).ab,ti.	USPAT;	2004/02/02 18:59
Ì			ЕРО; ЈРО	
-	74	379/216.01,355.01-356.01.ccls. and ((abbreviat\$3 or speed) near3	USPAT;	2004/02/02 17:31
		(dial\$3 or number).ab,ti.)	ЕРО; ЈРО	
-	2782	automat\$3 near5 updat\$3	USPAT,	2004/02/02 17:32
		•	ЕРО, ЛО	
	3	(379/216.01,355.01-356.01.ccls. and ((abbreviat\$3 or speed) near3	USPAT;	2004/02/02 17:43
		(dial\$3 or number).ab,ti.)) and (automat\$3 near5 updat\$3)	ЕРО; ЛРО	200 1102102 17:15
_	2579	(time near5 call\$3) with count\$3	USPAT;	2004/02/02 17:44
	23,7	(unic nears canes) with counties	ЕРО; ЛРО	2004/02/02 17:44
	3006	repeat\$3 near5 (call\$3 or number) with count\$3		2004/02/02 17:44
-	3000	repeates hears (canos or number) with counts	USPAT;	2004/02/02 17:44
	5507	(/// 5 1100) 1/1 (00) ( 100 5 ( 1100	ЕРО; ЛРО	*****
-	5507	((time near5 call\$3) with count\$3) or (repeat\$3 near5 (call\$3 or	USPAT;	2004/02/02 17:44
		number) with count\$3)	ЕРО; ЛРО	
-	29	379/216.01,355.01-356.01.ccls. and (((time near5 call\$3) with count\$3)	USPAT;	2004/02/02 17:50
		or (repeat\$3 near5 (call\$3 or number) with count\$3))	ЕРО; ЈРО	
-	1811	automat\$3 near2 updat\$3	USPAT;	2004/02/02 17:51
ļ			ЕРО, ЈРО	
-	1	(379/216.01,355.01-356.01.ccls. and (((time near5 call\$3) with count\$3)	USPAT;	2004/02/02 18:18
	,	or (repeat\$3 near5 (call\$3 or number) with count\$3))) and (automat\$3	ЕРО; ЛРО	
		near2 updat\$3)		
_	87	(programm\$3 or updat\$3) near2 speed near2 dial\$3	USPAT;	2004/02/02 18:19
	67	(hiotimining or abasima) nears speca nears diams	,	2004/02/02 18:19
_	21	(((time near5 call\$3) with count\$2) or (remov\$2 (11\$2	ЕРО; ЛРО	2004/02/02 10 12
-	21	(((time near5 call\$3) with count\$3) or (repeat\$3 near5 (call\$3 or	USPAT;	2004/02/02 18:19
ļ		number) with count\$3)) and ((programm\$3 or updat\$3) near2 speed	ЕРО; ЛРО	
		near2 dial\$3)		
-	2	379/216.01,355.01-356.01.ccls. and ((((time near5 call\$3) with count\$3)	USPAT;	2004/02/02 18:19
		or (repeat\$3 near5 (call\$3 or number) with count\$3)) and ((programm\$3	ЕРО; ЈРО	
		or updat\$3) near2 speed near2 dial\$3))		
	9034	((abbreviat\$3 or speed) near3 (dial\$3 or number).ab,ti.) or	USPAT;	2004/02/02 19:00
-		((programm\$3 or updat\$3) near2 speed near2 dial\$3)	ЕРО; ЈРО	
-				2004/02/02 10:00
-	87	[ ((programm%) or updat%)) near2 sneed near2 dial%3) and (((abbreviat%)	LUSPAT	/()()4/( // )/   (0.111
-	87	((programm\$3 or updat\$3) near2 speed near2 dial\$3) and (((abbreviat\$3 or speed) near3 (dial\$3 or number) ab ti ) or ((programm\$3 or updat\$3)	USPAT;	2004/02/02 19:00 
-	87	or speed) near3 (dial\$3 or number).ab,ti.) or ((programm\$3 or updat\$3)	EPO; JPO	2004/02/02 19:00
-	87 6225			2004/02/02 19:00

-	10	"5734712" and predeterm\$5	USPAT;	2004/06/25 14:02
-	1	"6119090" and output\$3	EPO; JPO USPAT;	2004/06/25 13:23
-	1	"6119090" and reference	EPO; JPO USPAT;	2004/06/25 13:24
-	0	"6119090" and exceed\$1	EPO; JPO USPAT;	2004/06/25 13:34
-	0	"6119090" and final	EPO; JPO USPAT; EPO; JPO	2004/06/25 13:34
-	3	"6119090" and relat\$3	USPAT; EPO; JPO	2004/06/25 13:39
-	3	"6119090" and resistor	USPAT; EPO; JPO	2004/06/25 13:41
-	3	"6119090" and capacitor	USPAT; EPO; JPO	2004/06/25 13:41
-	0	"5734712" and compar\$3 near input	USPAT; EPO; JPO	2004/06/25 14:03
-	3	"5734712" and (compar\$3 near5 input)	USPAT; EPO; JPO	2004/06/25 14:03
-	9	"5734712" and (compar\$3)	USPAT; EPO; JPO	2004/06/25 14:04
-	9	"5734712" and (compar\$3) and predeterm\$5	USPAT; EPO; JPO	2004/06/25 14:07
-	0	"5734712" and final\$1	USPAT; EPO; JPO	2004/06/25 14:08
-	6	"5734712" and exceed\$1	USPAT; EPO; JPO	2004/06/25 14:09
-	1017	dtmf with decoder	USPAT; EPO; JPO	2004/07/05 16:20
-	696817	amplifier or driver	USPAT; EPO; JPO	2004/07/05 10:24
-	44927	"adc" or analog adj digital adj converter	USPAT; EPO; JPO	2004/07/05 10:24
-	591077	cpu or processor or digital adj logic	USPAT; EPO; JPO	2004/07/05 10:25
-	2466	(amplifier or driver) same ("adc" or analog adj digital adj converter) same (cpu or processor or digital adj logic)	USPAT; EPO; JPO	2004/07/05 10:00
-	1	(dtmf with decoder) same ((amplifier or driver) same ("adc" or analog adj digital adj converter) same (cpu or processor or digital adj logic))	USPAT; EPO; JPO	2004/07/05 10:00
-	8784		USPAT; EPO; JPO	2004/07/05 10:02
-	24	((amplifier or driver) same ("adc" or analog adj digital adj converter) same (cpu or processor or digital adj logic)) same dtmf	USPAT; EPO; JPO	2004/07/05 10:04
-	98746	tip and ring	USPAT; EPO; JPO	2004/07/05 10:55
		(dtmf with decoder) and (((amplifier or driver) same ("adc" or analog adj digital adj converter) same (cpu or processor or digital adj logic))	USPAT; EPO; JPO	2004/07/05 10:05
-	2	and (tip and ring)) (((amplifier or driver) same ("adc" or analog adj digital adj converter) same (cpu or processor or digital adj logic)) and (tip and ring)) and dtmf	USPAT;	2004/07/05 10:05
-	107	((amplifier or driver) same ("adc" or analog adj digital adj converter)  same (cpu or processor or digital adj logic)) and (tip and ring)	EPO; JPO USPAT; EPO; JPO	2004/07/05 10:09
-	10943	reshap\$3	USPAT; EPO; JPO	2004/07/05 11:13
-	2	(tip and ring) and (((amplifier or driver) same ("adc" or analog adj digital adj converter) same (cpu or processor or digital adj logic)) and dtmf)	USPAT; EPO; JPO	2004/07/05 10:09
-	62	((amplifier or driver) same ("adc" or analog adj digital adj converter) same (cpu or processor or digital adj logic)) and dtmf	USPAT;	2004/07/05 10:12
-	100161	land (tip and ring)	EPO; JPO USPAT;	2004/07/05 10:12
-	222	(dtmf with decoder) and (tip and ring)	EPO; JPO USPAT; EPO; JPO	2004/07/05 10:12
			L. C, 51 C	

171   ((dtmf with decoder) and (tip and ring)) and (amplifier or driver)   C(dtmf with decoder) and (tip and ring)) and (amplifier or driver)) and (tip and ring) and (amplifier or driver) and (tip and ring)) and (amplifier or driver) and (tip and ring))   C(pu or processor or digital adj converter)   C(pu or processor or digital adj convert					
8	-	171	((dtmf with decoder) and (tip and ring)) and (amplifier or driver)	,	2004/07/05 10:13
Section of processor or digital adj logic) and (((dufm with decoder) and (tip) USPAT; EPC, IPO converter)) and (amplifier or driver)) and ("adc" or analog adj digital adj converter)   2004/07/05 11:14   2004/07/05 11:14   2004/07/05 11:14   2004/07/05 11:14   2004/07/05 11:14   2004/07/05 11:14   2004/07/05 11:15   2004/07/05 11:15   2004/07/05 11:15   2004/07/05 11:15   2004/07/05 11:15   2004/07/05 11:15   2004/07/05 11:15   2004/07/05 11:15   2004/07/05 11:15   2004/07/05 10:25	-	8		USPAT;	2004/07/05 10:13
2004/07/05 11:14   2004/07/05 11:14   2004/07/05 11:14   2004/07/05 11:14   2004/07/05 11:14   2004/07/05 11:14   2004/07/05 11:14   2004/07/05 11:14   2004/07/05 11:14   2004/07/05 11:14   2004/07/05 11:14   2004/07/05 11:14   2004/07/05 11:14   2004/07/05 11:16   2004/07/05 11:16   2004/07/05 11:16   2004/07/05 11:16   2004/07/05 11:16   2004/07/05 11:16   2004/07/05 11:16   2004/07/05 11:16   2004/07/05 11:16   2004/07/05 11:16   2004/07/05 11:16   2004/07/05 11:16   2004/07/05 11:16   2004/07/05 11:16   2004/07/05 10:25   2004/07/05	-	8	(cpu or processor or digital adj logic) and ((((dtmf with decoder) and (tip and ring)) and (amplifier or driver)) and ("adc" or analog adj digital adj	USPAT;	2004/07/05 10:13
55378	-	477546		US-PGPUB;	2004/07/05 11:14
2766   amplifier same ("ade" or analog adj digital adj converter) same (cpu or processor or digital adj logic)   Topic processor or digital adj converter)   Topic processor or digital adj logic)   Topic processor or digital adj	-	55378	"adc" or analog adj digital adj converter	USPAT; US-PGPUB;	2004/07/05 11:06
7   (dumf adj2 decoder) and (amplifier same ("adc" or analog adj digital adj logic)   USPAT, USPAT, PRO; IPO USPAT, USP, PRO; IPO USP, PRO;	-	2766		USPAT; US-PGPUB;	2004/07/05 10:25
T3497   379/S.ccls.   USPAT, EPO, IPO   2004/07/05 10:32   2004/07	-	7		USPAT; US-PGPUB;	2004/07/05 10:25
133	-	73497	379/\$.ccls.	USPAT;	2004/07/05 10:32
C	-			USPAT; EPO; JPO	
adj2 decoder) and 379/8.ccls.))   EPO, IPO USPAT, US-PGPUB, "S504811" "4278847" "4333133"   "4368361"   "4388500"   "5249225"   "5553291"   "55533119"   "6343126").PN.  - 68531	-		,	ЕРО, ЈРО	
Camplifier same ("adc" or analog adj digital adj converter) same (cpu or processor or digital adj logic)) and dtmf ab,ti.   7	-		adj2 decoder) and 379/\$.ccls.))	ЕРО, ЛРО	
processor or digital adj logic)) and dtmf.ab,ti.   US.PGPUB, EPO, JPO   USPAT   2004/07/05 10:47   2004/07/05 10:47   2004/07/05 10:47   2004/07/05 10:51   2004/07/05 10:55   2004/07				US-PGPUB; EPO; JPO	
-   7	-	3		US-PGPUB;	2004/07/05 10:42
Continue	-		"5392348"   "5408529").PN.		2004/07/05 10:47
Camplifier same ("ade" or analog adj digital adj converter) same (cpu or processor or digital adj logic)) and (dtmf adj2 detector or dual adj tone adj detector) tip and ring   USPAT; USPGPUB; EPO; JPO USPAT; USPGPUB; USPGPUB; EPO; JPO USPAT; USPGPUB; EPO; JPO USPAT; USPGPUB; EPO; JPO USPAT; USPGPUB; EPO; JPO USPAT; USPGPUB;	-	700	dtmf adj2 detector or dual adj tone adj detector	US-PGPUB;	2004/07/05 10:51
- 118302 tip and ring  118302 tip and ring  (dtmf adj2 detector or dual adj tone adj detector) and (tip and ring)  (dtmf adj2 detector or dual adj tone adj detector) and (tip and ring)  ((dtmf adj2 detector or dual adj tone adj detector) and (tip and ring)) and amplifier  (((dtmf adj2 detector or dual adj tone adj detector) and (tip and ring)) and amplifier) and ("adc" or analog adj digital adj converter)  ("((dtmf adj2 detector or dual adj tone adj detector) and (tip and ring)) and amplifier) and ("adc" or analog adj digital adj converter)  ("4041252"   "4278847"   "4333133"   "4368361"   "4388500"   USPAT; US-PGPUB; EPO; JPO USPAT  "4567331"   "4787080"   "4812851"   "4918725"   "4961218"   "49487569"   "5034978"   "5132963"   "5204854"   "5249225"   "5253291"   "5280526"   "5287406"   "5333194"   "5434916"   "5504811"   "5504811"   "5503411"   "6343126").PN.  (dtmf adj2 detector or dual adj tone adj detector) and ("adc" or analog adj digital adj converter or codec  185 (dtmf adj2 detector or dual adj tone adj detector) and ("adc" or analog adj digital adj converter or codec)	-	20	processor or digital adj logic)) and (dtmf adj2 detector or dual adj tone	USPAT; US-PGPUB;	2004/07/05 10:51
- 93 ((dtmf adj2 detector or dual adj tone adj detector) and (tip and ring)  - 93 ((dtmf adj2 detector or dual adj tone adj detector) and (tip and ring)) and amplifier  - 4 (((dtmf adj2 detector or dual adj tone adj detector) and (tip and ring)) and amplifier (((dtmf adj2 detector or dual adj tone adj detector) and (tip and ring)) and amplifier) and ("adc" or analog adj digital adj converter)  - 23 ("4041252"   "4278847"   "4333133"   "4368361"   "4388500"   USPAT; US-PGPUB; EPO; JPO USPAT (US-PGPUB; EPO; JPO USPAT; US-PGPUB; EPO; JPO (USPAT; US-PGPUB; US-PGPUB; EPO; JPO (USPAT; US-PGPUB;	-	118302		USPAT; US-PGPUB;	2004/07/05 10:55
185   ((dtmf adj2 detector or dual adj tone adj detector) and (tip and ring)) and amplifier   (((dtmf adj2 detector or dual adj tone adj detector) and (tip and ring))   (USPAT; US-PGPUB; EPO; JPO USPAT; US-PGPUB; and amplifier) and ("adc" or analog adj digital adj converter)   ("4041252"   "4278847"   "4333133"   "4368361"   "4388500"   USPAT   ("4567331"   "4787080"   "4812851"   "4918725"   "4961218"   "4987569"   "5034978"   "5132963"   "5204854"   "5249225"   "5253291"   "5280526"   "5287406"   "5333194"   "5434916"   "5504811"   "5533119"   "6343126").PN.   (dtmf adj2 detector or dual adj tone adj detector) and ("adc" or analog adj digital adj converter or codec)   USPAT; US-PGPUB; EPO; JPO USPAT; adj digital adj converter or codec)   USPAT; US-PGPUB; EPO; JPO USPAT; US-PGPUB; EPO	-	166	(dtmf adj2 detector or dual adj tone adj detector) and (tip and ring)	USPAT; US-PGPUB;	2004/07/05 10:58
- 4 (((dtmf adj2 detector or dual adj tone adj detector) and (tip and ring)) and amplifier) and ("adc" or analog adj digital adj converter)  - 23 ("4041252"   "4278847"   "4333133"   "4368361"   "4388500"	-	93		USPAT; US-PGPUB;	2004/07/05 11:02
- 23 ("4041252"   "4278847"   "4333133"   "4368361"   "4388500"   USPAT 2004/07/05 11:03   "4567331"   "4787080"   "4812851"   "4918725"   "4961218"   "5249225"   "5253291"   "5280526"   "5287406"   "5333194"   "5434916"   "5504811"   "5533119"   "6343126").PN.  - 68531	-	4		USPAT; US-PGPUB;	2004/07/05 11:02
- 68531 "adc" or analog adj digital adj converter or codec USPAT; US-PGPUB; EPO; JPO USPAT; US-PGPUB; adj digital adj converter or codec) USPAT; US-PGPUB; US-PGPUB; US-PGPUB;	-	23	"4567331"   "4787080"   "4812851"   "4918725"   "4961218"   "4987569"   "5034978"   "5132963"   "5204854"   "5249225"   "5253291"   "5280526"   "5287406"   "5333194"   "5434916"		2004/07/05 11:03
- 185 (dtmf adj2 detector or dual adj tone adj detector) and ("adc" or analog adj digital adj converter or codec)  USPAT; US-PGPUB;	-	68531		US-PGPUB;	2004/07/05 11:07
	-	185		USPAT;	2004/07/05 11:07

	92	amplifier and (cpu or processor or digital adj logic) and ((dtmf adj2	USPAT;	2004/07/05 11:08
	/2	detector or dual adj tone adj detector) and ("adc" or analog adj digital	US-PGPUB;	200 1101103 11.08
		adj converter or codec))	ЕРО: ЛРО	
-	24	(tip and ring) and (amplifier and (cpu or processor or digital adj logic)	USPAT;	2004/07/05 11:08
		and ((dtmf adj2 detector or dual adj tone adj detector) and ("adc" or	US-PGPUB;	
		analog adj digital adj converter or codec)))	ЕРО; ЛРО	
-	13740	reshap\$3	USPAT;	2004/07/05 11:13
			US-PGPUB;	
			ЕРО; ЈРО	
-	635	amplifier same reshap\$3	USPAT;	2004/07/05 11:14
			US-PGPUB;	
			ЕРО; ЈРО	
-	37674	invert\$3 and non-invert\$3	USPAT;	2004/07/05 11:15
			US-PGPUB;	
			ЕРО; ЈРО	
•	51	(amplifier same reshap\$3) and (invert\$3 and non-invert\$3)	USPAT;	2004/07/05 11:15
			US-PGPUB;	
		// 217	ЕРО; ЈРО	
-	2	((amplifier same reshap\$3) and (invert\$3 and non-invert\$3)) and ("adc"	USPAT;	2004/07/05 11:15
		or analog adj digital adj converter or codec)	US-PGPUB;	
			ЕРО; ЈРО	ĺ

## **Patent Assignment Abstract of Title**

**Total Assignments: 1** 

**Application #: 10064641 Filing Dt: 08/01/2002** Patent #: NONE **Issue Dt:** 

PCT #: NONE Publication #: <u>US20030235292</u> Pub Dt: 12/25/2003

Inventor: George Cheng

Title: Dual tone multi-frequency decoder combines software and hardware and method of

operating the same

Assignment: 1

**Reel/Frame:** <u>012947/0758</u> **Received:** 08/02/2002 Recorded: Mailed: Pages:

08/02/2002 08/02/2002

Conveyance: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

Assignor: CHENG, GEORGE Exec Dt: 07/16/2002

Assignee: SINO WEALTH ELECTRONIC (SHANGHAI) LTD.

NO.132, TIAN LIN ROAD SHANGHAI, CHINA

Correspondent: JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE

7 FLOOR-1, NO. 100

ROOSEVELT ROAD, SECTION 2

TAIPEI, TAIWAN 100

Search Results as of: 7/5/2004 3:10:56 P.M.

If you have any comments or questions concerning the data displayed, contact OPR / Assignments at 703-308-9723 Web interface last modified: Oct. 5, 2002